INFILLING

D.M.P. ABEYAWARDENA

Brunswick State Plantation, Maskeliya

Vacancies occur in mature tea due to many reasons, some of which are root diseases, pests, hard pruning, poor soil conditions, prolonged periods of dry weather, and lack of food reserves in the bush itself. Unless such vacancies are infilled systematically, yields will either remain static or even decline.

Fields with a reasonable jat of tea, standing in good soil, not scheduled for replanting in the near future, should be chosen for infilling, which work will have to be phased over a period of years, depending on the availability of good healthy VP plants.

Preparation for infilling should be carried out in the fields selected, two years before pruning in areas with a large proportion of vacancies, and in the year before pruning in other areas.

Initially all vacant patches of tea should be examined to determine the cause of death of the bushes. If diseased roots or pests are not found present, such patches should be forked out, removing all roots and these areas planted in Mana grass if preparation is done two years before pruning.

If however, root diseases such as *Poria* or *Ustulina*, or pests such as live-wood termite are found, such areas will have to be treated prior to infilling being undertaken. All affected bushes, stumps and roots will have to be forked out carefully, ensuring that no diseased roots are left in the soil, and it is imperative to ensure that what has been forked out and uprooted is burnt

'in situ'. On no condition should diseased tea bushes be allowed to be taken away from site for use as firewood in the lines as this would cause further spread of infection.

In areas with no disease only three or more vacancies should be tackled to achieve reasonable success. In areas which have been identified to be affected by pests and disease, further to uprooting and burning of all infected bushes, a ring of good tea must be similarly uprooted and burnt and then these patches 'squared up'. It is essential that all diseased patches be fumigated with Methyl Bromide.

In the year of infilling prior to commencing planting, cutting of holes should be done. The planting hole should have the following dimensions, a minimum depth of 18 inches, width at bottom of hole of 6 inches, width at top of hole of 9 inches. The size of hole should be checked soon after with a 'measuring frame' and the holes filled. This prevents case-hardening of the sides. It must be ensured that holes are filled only with good soil. If stones and poor subsoil are found, such patches should not be infilled, but be planted up in mana grass, the loppings of which could be subsequently used as thatch.

When pegging for holes, the old tea row should be followed but the distance between plants in the row could be reduced to two feet in bigger patches.

At the time of planting, the soil in the filled hole should first be stamped down, and then a space just sufficient to accommodate the nursery plant should be excavated, preferably with a coconut shell. This hole should be sprinkled with quarter ounce of a systemic granular nematicide such as Nemacur or Furadan just before the plant is put out.

All infilled plants should be protected with baskets, ensuring that the height of the baskets does not exceed eight inches as otherwise lateral plant growth will be inhibited.

Once protection baskets are placed, all infilled patches should be thatched using guatemala, mana or *Era-*

grostis loppings. Denatured refuse tea could also be used if thatch is not available. (It would be advisable to plant mana grass in adjacent ravines when preparation of land for infilling commences to ensure a regular supply of thatch).

The failure of most infilled patches is mainly due to insufficient after-care of these plants. All side branches of mature tea overhanging the young plants should be cut-back. Application of T.200 fertilizer should be commenced once the plants put out new shoots and regular applications done till these plants come into bearing.

Some plants infilled in patches may show signs of poor growth. These plants will respond to foliar sprays such as Maxicrop 2½ oz diluted in one gallon water and 3-4 such applications being made at fortnightly intervals.

A sharp pair of secateurs for centering plants should be used, the first cut being given at 6"-9" when the plant has achieved the thickness of a pencil at point of cut. Subsequent centering could be done at 12"-15", the plants allowed to consolidate well and then tipped at 18" and brought into bearing about three years after planting. Bringing in plants into bearing early will retard subsequent growth later.

The choice of clone for infilling is very necessary and I prefer CY 9 and DN for smaller patches and TRI 2025 for larger patches. A well organized nursery programme is essential to ensure that big healthy plants are available for putting out.

These observations are based mainly on my experience in up-country tea and are not necessarily applicable to lower elevations.